



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/788,895	02/27/2004	Scot Olson	H0005012--1623	4986

128 7590 03/28/2007
HONEYWELL INTERNATIONAL INC.
101 COLUMBIA ROAD
P O BOX 2245
MORRISTOWN, NJ 07962-2245

EXAMINER

NGUYEN, JENNIFER T

ART UNIT	PAPER NUMBER
----------	--------------

2629

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/28/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/788,895

Applicant(s)

OLSON ET AL.

Examiner

Jennifer T. Nguyen

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 2/27/04.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12-21 is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/28/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 5, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Lee et al. (Patent No.: US 6,947,024).

Regarding claim 1, Lee teaches a lamp driver device (fig. 1) for driving a fluorescent lamp (L1-L4) in an optical display (LCD, fig. 2), the lamp driver device comprising:

a power recovery and control circuit (31 and 41), the power recovery and control circuit coupled to a lamp interface and feeding back excess energy from the lamp interface to a power source, the power recovery and control circuit including a current limiter (i.e., electric current detecting part), the current limiter disabling power in the lamp driver when the excess energy feeding back into the power source has a current above a selected value (i.e., a predetermined threshold value) (col. 4, lines 4-18, lines 49-52, col. 5, lines 31-48).

Regarding claims 5 and 11, Lee teaches a power controller, the power controller receiving a signal proportional to current in the fluorescent lamp, the power controller limiting current in the fluorescent lamp when the current begins to exceed a predetermined level (col. 4, line 66 to col. 5, line 8).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-4 and 6-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lee et al. (Patent No.: US 6,947,024) in view of Praiswater (Patent No.: US 5,754,013).

Regarding claim 2, Lee differs from claim 2 in that he does not specifically teach “a logarithmic amplifier... in the fluorescent lamp rise”.

Praiswater teaches a logarithmic amplifier having a relatively high gain at low luminance levels and an exponentially decreasing gain as luminance levels in the fluorescent lamp rise (col. 3, lines 58-61, col. 4, line 42 to col. 5, line 65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the logarithmic amplifier as taught by Praiswater in the system of Lee in order to adjust the display luminance efficiently.

Regarding claims 3 and 9, the combination of Lee and Praiswater teaches a temperature compensating resistor selected to compensate the logarithmic amplifier for changes in temperature, and further includes a pair of matched transistors and wherein the temperature compensating resistor is selected to compensate for temperature in the pair of matched transistors (col. 3, lines 58-61, col. 4, line 42 to col. 5, line 65).

Regarding claims 4 and 10, the combination of Lee and Praiswater teaches an op amp with negative feedback, and wherein the op amp with negative feedback is configured to drive a current such that substantially zero volts are across a photo-diode to compensate for temperature differences in the photo-diode (col. 3, lines 58-61, col. 4, line 42 to col. 5, line 65).

Regarding claims 6 and 8, Lee teaches a lamp driver device (fig. 1) for driving a fluorescent lamp (31-34) in an optical display (fig. 2), the lamp driver device comprising:

a power recovery and control circuit (31 and 41), the power recover and control circuit coupled to a lamp interface and feeding back excess energy from the lamp interface to a power source, the power recovery and control circuit providing a precise control of plasma in the fluorescent lamp to reduce collisions with mercury atoms in the fluorescent lamp (col. 4, lines 4-18, lines 49-52, col. 5, lines 31-48).

Lee differs from claims 6 and 8 in that he does not specifically teach "a logarithmic amplifier... high luminance levels".

Praiswater teaches a logarithmic amplifier having a relatively high gain at low luminance levels and an exponentially decreasing gain as luminance levels in the fluorescent lamp rise (col. 3, lines 58-61, col. 4, line 42 to col. 5, line 65). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the logarithmic amplifier as taught by Praiswater in the system of Lee in order to adjust the display luminance efficiently.

Regarding claim 7, Lee teaches the power recovery and control circuit including a current limiter (i.e., electric current detecting part), the current limiter disabling power in the lamp driver

Art Unit: 2629

when the excess energy feeding back into the power source has a current above a selected value (i.e., a predetermined threshold value) (col. 4, line 66 to col. 5, line 8).

5. Claims 12-21 are allowed.

6. The prior art made of record and not relied upon is considered to pertinent applicant's disclosure: Patent. No. US 6,894,394 and 6,222,709.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer T. Nguyen whose telephone number is 571-272-7696. The examiner can normally be reached on Mon-Fri: 9:00am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard A. Hjerpe can be reached on 571-272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Nguyen
3/24/07



**RICHARD HJERPE
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600**